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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/610,494	06/30/2003	Lie Gu	MS1-1523US	5328
22801	7590	10/31/2006	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			MARIAM, DANIEL G	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/610,494

Applicant(s)

GU ET AL.

Examiner

DANIEL G. MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-55 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/03 & 1/5/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: claim 9 does not end with a period. Each claim begins with a capital letter and ends with a period. Periods may not be used elsewhere in the claims except for abbreviations (See MPEP 608.01(m)). Appropriate correction is required.
2. Claims 7, 21, 32, and 44 are objected to because of the following informalities: each of these claims recite the limitation "yaw different" and appears to be misspelled, and should be changed to "yaw difference". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Independent claims 1, 14, 25, 37, and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation "matching outer and inner facial features of a face model with: " . . . adjusting each said matching outer and inner facial feature of the first and second models using the corresponding epipolar constraint for the first and second models". What is the purpose of adjusting each said matching outer and inner facial feature of the first and second models using the corresponding epipolar constraint for the first and second models? Are the first and second face images identical or different in their content? Claim 1 further recites "first and second models". Are these models derived from the

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face model? One or more of these limitations also occurs in the above-identified remaining independent claims. Please clarify.

Since claims 2-13, 15-24, 26-36, 38-45, and 47-55 directly or indirectly depend on claims 1, 14, 25, 37, and 46, they are also rejected under 35 U.S.C. 112, second paragraph, for the same reasons set forth above for claims 1, 14, 25, 37, and 46.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-4, 6, and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Yang, et al (Model-Based Head Pose Tracking With Stereovision).

With regard to claim 1, as best understood, Yang, et al discloses a method comprising: matching outer and inner facial features of a face model (See pages 243-244, section 4.1) with: that of a first model for a first face image; and that of a second model for a second face image, and adjusting, i.e., the removal of stray points using an epipolar constraint, each said matching outer and inner facial feature of the first and second models using the corresponding epipolar constraint for the first and second models (See page 244, section 4.2).

With regard to claim 2, the method as defined in claim 1, wherein: the inner facial features comprise a nose, a mouth and a pair of eyes; and the outer facial features comprise an arcuate bottom edge of the face and a pair of eyebrows (given the broadest reasonable interpretation, it reads on Figure 2).

With regard to claim 3, the method as defined in claim 1, wherein a plurality of points correspond to each said inner facial feature and comprise: a plurality of mouth corners corresponding to the mouth; a plurality of eyes corners corresponding to the eye; and a nose tip corresponding to the nose (See for example, Figs. 5-6).

With regard to claim 4, the method as defined in claim 1, wherein the first and second face images are the same face captured at the substantially the same respective camera orientation (See Figs. 1-3).

With regard to claim 6, the method as defined in claim 1, wherein the first and second face images are pictures taken at the substantially the same respective camera orientation of the same face in substantially the same face pose range but differing by the yaw (See for example, Fig. 5).

With regard to claim 12, the method as defined in claim 1, further comprising identifying the face of a person in a database that matches at least one of the first and second face images by using the respective outer and inner facial features of the first and second models (See pp. 243-244, sections 4.1 & 4.2).

With regard to claim 13, a computer readable medium comprising instructions that, when executed, perform the method of claim 1 (See page 245, section 5).

Conclusion


7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent Numbers: 6181806, 6301370, and 6611613; and a publication to Lin, et al "Extracting 3D facial animation parameters from multiview video clips".

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DANIEL G MARIAM
Primary Examiner
Art Unit 2624

October 26, 2006